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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,106	01/20/2004	Eric R. Larson	16274.175	3129

22913 7590 12/13/2006

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EXAMINER

PAYNE, DAVID C

ART UNIT PAPER NUMBER

2613

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/761,106	LARSON, ERIC R.	
	Examiner	Art Unit	
	David C. Payne	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-16 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 4-7 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 8-16, and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Sato et al. US 2004/0062491 A1 (Sato).

Re claims 1-3, 8-16, and 18-20 Sato disclosed,

FIG. 1 is a view of the internal structure of the optical data link according to this embodiment, and FIG. 2 is a perspective view of the components of the optical data link according to the present embodiment. In FIGS. 1 and 2, the optical data link 10a includes a housing 20, an optical subassembly 24, a circuit board 26, a first heat spreader 44 and a second heat spreader 46. A semiconductor device 34b is provided on the circuit board 26 with a protection member 34a, such as molded resin or a package. The first heat spreader 44 is provided between the housing 20 and the semiconductor device 34b, and contacts with the housing 20 and the semiconductor device 34b. The second heat spreader 46 is provided between the housing 20 and the optical subassembly 24, and contacts with the housing 20 and the optical subassembly 24. There is an interval between the first heat spreader 44 and the

second heat spreader 46. The first heat spreader 44 is provided in a first region 26m, and the second heat spreader part 46 is provided in a second region 26k. The third region 26n serves to space the first heat spreader 44 from the second heat spreader 46. The optical subassembly 24 is supported by the housing 20 and includes a semiconductor optical device, which is connected to the semiconductor device 34b through a conductive pattern 26i on the circuit board 26.

Heat from the semiconductor device 34b is conducted to the first heat spreader 44, and heat from the optical subassembly 24 is conducted to the second heat spreader 46. Since the first heat spreader 44 is located apart from the second heat spreader 46, thermal interference between the semiconductor device 34b and the optical subassembly 24 can be reduced.

The housing 20 includes a base 22 and a cover 28. The circuit board 26 is provided between the base 22 and the cover 28 made of a conductive material. The optical subassembly 24 is provided on the primary surface of the base 22. The circuit board 26 is mounted on the base 22 so as to provide a room sufficient to place one or more electronic parts between the circuit board 26 and the base 22.

[0061] Referring to FIG. 1, a sleeve 52 is placed at a tip of the optical subassembly 24. The sleeve 52 guides a ferrule 56 attached to an optical fiber 54, whereby the optical fiber 54 can be optically coupled to the optical subassembly 24.

The optical subassembly 24 is supported by a first spacer 30 provided on the primary surface of the base 22. The first spacer 30 positions the optical

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subassembly 24 on the base 22 so as to direct it toward a predetermined direction.

The circuit board 26 is supported by a second spacer 32. The second spacer 32 is located on the primary surface of the base 22 so as to provide space sufficient to place one or more electronic parts between the circuit board 26 and the primary surface of the base 22, paragraphs 58-62.

Allowable Subject Matter

3. Claims 4-7 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

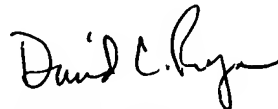
Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (571) 272-3024. The examiner can normally be reached on M-F, 7:00a - 4:30p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dcp



David C. Payne
Primary Examiner
AU 2613